“How to improve hand hygiene in a limited resources environment?

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Objectives

- To stress on the role of Hand Hygiene (HH) in supporting IPC activities in healthcare settings.
- To highlight the role of HH in combatting AMR (antimicrobial resistance.
- To overview the role of outbreaks such as Ebola virus disease as a challenge to adherence to HH and PPE.
Introduction

• In developed countries 5-10% of hospital in-patients are estimated to acquire a nosocomial infection.
• Little is known yet about the importance of nosocomial infections in developing countries, but estimates put the risk at 3-12%.
• Nosocomial infections have long been neglected in Sub-Saharan Africa, and hand hygiene (HH) is usually neglected in hospital settings.
Introduction

• Hand hygiene (HH) is the key tool to prevent healthcare-associated infections and hence to protect the health of patients, guardians and health care workers visitors.
• The WHO highlighted the importance of hand hygiene by launching a campaign in 2009 and by issuing guidelines for resource-restrained settings.
• Compliance to Hand hygiene (HH) is still a challenge for success in implementation of infection prevention & control (IPC) programs.

• The following are experiences from different countries with limited resources.
IPC in EGYPT: Where is Hand Hygiene?

- IPC in Egypt in 1990s.
- HH had a long history before.
- Linked to Islamic Religion (Ablutions).
- HH is a part of our daily life (eating, toilet; etc.).
- 2005: The WHO launches its world campaign for patient safety with the globalization of the strategy employing alcohol-based handrub.
- Since Egyptian hospitals have started to introduce alcohol-based handrub to enhance HH and to substitute hand washing with soap & water in some areas.
Types of HH

- soap & water
- alcohol-based hand rub
Five Moments of Hand Hygiene

1. Before touching a patient
2. Before clean/aseptic procedure
3. After body fluid exposure or risk
4. After touching a patient
5. After touching patient surroundings
Effectiveness of a multimodal hand hygiene campaign and obstacles to success in Addis Ababa, Ethiopia. Schmitz et al., Antimicrobial Resistance and Infection Control 2014, 3:8

- This study assessed the impact of implementing a WHO-recommended multimodal HH campaign at a hospital in Ethiopia. This study included a before-and-after assessment of (HCW) adherence with WHO HH guidelines. It was implemented in three phases: 1) baseline evaluation of HH adherence and hospital infrastructure; 2) intervention (distribution of commercial hand sanitizer and implementation of an abbreviated WHO-recommended multimodal HH campaign); and 3) post-intervention evaluation of HCW HH adherence. HCWs’ perceptions of the campaign and hand sanitizer tolerability were assessed through a survey performed in the post-intervention period.

Results:
- At baseline, hand washing materials were infrequently available, with only 20% of sinks having hand-washing materials.
- There was a significant increase in HH adherence among HCWs following implementation of a WHO multimodal HH program. Adherence increased from 2.1% at baseline (21 HH actions/1000 opportunities for HH) to 12.7% (127 HH actions /1000 opportunities for HH) after the implementation of the HH campaign (OR = 6.8, 95% CI 4.2-10.9). HH rates significantly increased among all HCW types except attending physicians.

Conclusions:
- There was a significant increase in hand hygiene adherence among Ethiopian HCWs following the implementation of a WHO-recommended multimodal hand hygiene campaign. Dissatisfaction with the current WHO-formulation for hand sanitizer was identified as a barrier to hand hygiene adherence in our setting.
Hand hygiene practices and resources in a teaching hospital in Ghana

(Yawson and Hesse. J Infect Dev Ctries, 2013)

• **Aim:** This study aimed to provide baseline data on HH compliance among health workers and HH resources in a large West African teaching hospital.

• **Methodology:** A cross-sectional, observational study assessed personal and care-related HH compliance among doctors and nurses and HH resources in 15 service provision centres of the Korle-Bu Teaching Hospital (KBTH), Ghana, in 2011.

• **Results:** Data was collected with an infection prevention checklist and health worker HH compliance form, based on WHO guidelines.

• **Conclusion:** Care-related HH compliance among doctors and nurses in this large West African hospital is low; however, the NICU, which had implemented HH interventions, had better HH compliance.

• HH intervention programs should be designed and promoted in all service centres. Also, the introduction of alcohol-based hand rubs as an accessible and effective HH alternative in Korle-Bu Teaching Hospital is recommended.
Introducing alcohol based hand rub at Queen Elizabeth Central Hospital – a possible solution: Alcohol-based hand rub is a possible step to improve the hygiene situation in such a setting and was recommended already in 2002 by CDC.

In a charity-funded project 50 wall dispensers were purchased and installed on ten selected medical and surgical wards and on the Intensive Care Unit (ICU) of QECH.

After intense discussion with pharmacy, hospital administration and the Central Medical Stores of Malawi a sustainable supply of methylated spirit and glycerin could be secured.

Spirit and glycerin were mixed in the hospital pharmacy (1l spirit plus 10mg glycerin) and stored in 5l containers.

Together with the Infection Control Practitioner at QECH two focal persons per ward were identified and trained in a workshop.

The participants were taught basic facts about hand hygiene and about the importance of spreading the knowledge to new members of staff, medical students and – probably most essentially - to guardians who carry the major burden of patient care in Malawi.

The wall dispensers were demonstrated and the participants were taught about handling and care of the dispensers. The idea was to render these focal persons responsible for the refill of the dispensers.

Furthermore measures of hygiene and infection prevention, stressing the fact that hygiene should not end at the hospital gates but instead be continued after discharge. Information material in Chichewa and English was produced to help everyone on the wards in question. At least twice per week the focal persons were meant to train staff, students and guardians about the use of alcoholic hand rub and about general possibilities improving hand hygiene at hospital and at home.
a Malawian Example (cont’).

Conclusion:

- Improving hand hygiene is possible even under difficult circumstances.
- A major task is to include not only health care workers but also guardians who play a crucial role in patient care.
- A major challenge was that trained focal persons often were moved away from the wards without our knowledge, so that new staff had to be trained all over again.
- Also the intended teaching of new staff in the ward and guardians is not taking place as often as wished and necessary.
- Furthermore supply at Pharmacy could not be maintained at all times due to shortage of personal.
- Each hospital should have at least one hygiene focal person whose main job it could be to mix the hand rub, refill and clean the dispensers and to teach staff and guardians. This seems a much easier way forward.
- Universal access to alcoholic hand rub in wall dispensers should be standard of care in all hospitals in Malawi. Spirit and glycerin should become an integral part of every hospital budget.
- Training of staff and guardians has to go on continuously.
Impact of the International Nosocomial Infection Control Consortium (INICC) Multidimensional Hand Hygiene Approach over 13 Years in 51 Cities of 19 Limited-Resource Countries from Latin America, Asia, the Middle East, and Europe. Rosenthal et al., Infection control and hospital epidemiology april 2013, vol. 34, no. 4.

- An observational, prospective, cohort, interventional, before-and-after study from April 1999 through December 2011. The study was divided into 2 periods: a 3-month baseline period and a 7-year follow-up period.
- **Setting.** Ninety-nine intensive care unit (ICU) members of the INICC in Argentina, Brazil, China, Colombia, Costa Rica, Cuba, Greece, El Salvador, India, Lebanon, Lithuania, Macedonia, Mexico, Pakistan, Panama, Peru, Philippines, Poland, and Turkey.
- **Participants.** Healthcare workers at 99 ICU members of the INICC.
- **Methods.** A multidimensional **HH** approach was used, including (1) administrative support, (2) supplies availability, (3) education and training, (4) reminders in the workplace, (5) process surveillance, and (6) performance feedback.
- Observations were made for hand hygiene compliance in each ICU, during randomly selected 30-minute periods.
- **Results.** A total of 149,727 opportunities for **HH** were observed. Overall **HH** compliance increased from 48.3% to 71.4%. Univariate analysis indicated that several variables were significantly associated with poor **HH** compliance, including males versus females (63% vs 70%; ), physicians versus nurses (62% vs 72%; ), and adult versus neonatal ICUs (67% vs 81%; ).
- **Conclusions.** Adherence to hand hygiene increased by 48% with the INICC approach. Specific programs directed to improve hand hygiene for variables found to be predictors of poor hand hygiene compliance should be implemented.
Why do HCW don’t comply to HH?

- Too busy.
- Patient overcrowding
- Understaffing
- HH facilities are not available or too far.
- Skin irritation.
- They believe that their hands are clean or not spoiled.
- No p&p in place
Wow do improve compliance to HH?

- Staff educational & training.
- Availability of alcohol-based hand rub.
- HH facilities are in accessible places.
- Availability of hand care creams.
- Reminder at the work place (e.g. posters)
- Role play.
- Audit & feedback.
- Rewards.
H1N1

• New Influenza A (H1N1) is an acute respiratory illness which appeared in 2009.
• Transmission occurs in about half of cases by contact, either direct (for example, shaking hands), or indirect (by the intermediary of a contaminated surface), and in the other half by exposure to the airborne virus.

• HH & PPE had a good role in prevention & control of this emerging infection.
The present status

• Every year 5 May is considered as the day for celebration with HH.

• This year 2014 had another test; WHO and ICAN adopted the notion of integrating HH with combating antimicrobial resistance.

• HH is now considered the first step in prevention of antimicrobial resistance.

• Our SLOGAN is:

Safety is the responsibility of every one.
HH & Safe antibiotic is our business.
As of 2 May 2014, a total of to 17,036 hospitals and health-care facilities in 171 countries or areas have registered their commitment to hand hygiene as part of the global campaign – SAVE LIVES: Clean Your Hands.
Countries with no registrations

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5 May 2014
Role of hand hygiene to combat antimicrobial resistance
http://www.who.int/gpsc/5may/en/

No action today; no cure tomorrow – make sure the WHO 5 Moments are part of protecting your patients from resistant germs
MDR TB – New Infection


Image: World map showing the distribution of MDR TB and XDR TB, with color coding indicating the prevalence rates.

Legend:
- > 6%
- 3-6%
- < 3%
- No data

World Health Organization Conference, Harare, Zimbabwe

Patient Safety: A World Alliance for Safer Health Care

SAVE LIVES: Clean Your Hands

17 December 2014
It takes just 5 Moments to change the world

Clean your hands, stop the spread of drug-resistant germs!

5 May 2014
Role of hand hygiene to combat antimicrobial resistance
http://www.who.int/gpsc/5may/en/
Ebola Virus Disease

- Ebola virus disease (EVD), Ebola hemorrhagic fever (EHF) or simply Ebola is a disease of humans and other mammals caused by an ebola virus.
- Symptoms start two days to three weeks after contracting the virus, with a fever, sore throat, muscle pain and headaches.
- Typically, vomiting, diarrhea and rash follow, along with decreased function of the liver and kidneys.
Current outbreak
Figures accurate from 4-6 October, depending on country. Death toll in Liberia includes probable, suspect and confirmed cases, while in Sierra Leone and Guinea only confirmed cases are shown.
Washing hands and improving hygiene is one of the best ways to fight the virus.
Primary school children wash their hands after having their temperatures tested for signs of Ebola in Lagos, Nigeria.
EBOLA KEY MESSAGES

What is Ebola?
Ebola is a killer disease caused by a virus. It spreads quickly from person to person, kills in a short time, BUT can be prevented.

Signs & Symptoms
- FEVER
- VOMITING
  Sometimes bloody
- DIARRHOEA
  Sometimes bloody
- BLEEDING
- MUSCLE OR JOIN T PAIN
- SKIN RASH

How is Ebola spread?
It is spread through:
- Direct contact with wounds, body fluids like blood, saliva, vomitus, stool, urine of an infected person or splashing of such fluids from an infected person to another person and un-sterilized injections.
- Using skin piercing instruments that have been used by an infected person.
- Direct physical handling of persons who have died of Ebola.
- Eating bush meats, especially monkeys, chimpanzees, bats, or dead animals.
- Eating fruits that bats or wild animals have partly eaten (bat mot).

How to prevent Ebola
- Wash hands with soap after touching a sick person.
- Avoid eating bush meats especially Monkeys, Chimpanzees and Bats.
- Avoid eating fruits that bats or wild animals have partly eaten (Bat Mot).
- Persons suspected to have died of Ebola must be reported immediately to a health worker. Avoid washing the body and bury immediately.

Treatment for Ebola
- Persons suspected to be suffering from Ebola should go to the nearest health facility immediately.
- Early treatment can increase one’s chances of survival. Hospital care is best and includes food, drink, and medications.
- With good care, some patients will survive Ebola and we enter the convalescent stage. They usually show great improvement but may be welcome and do not re-aggravate them.

For More Information Call FREE 117
WHO & ICAN Message

• Help us reach 17,000 (registered HC facilities) by 5 May!
• Check out the list of countries with no registrations!
• Please make every possible effort to help us get more health-care facilities registered for the campaign and in new countries!
• We still need to spread this global movement!
• Share the registration call to action with colleagues now.
Conclusion

- HH is the most effective single measure to prevent transmission of HCAI.
- HH can reduce HAIs and the spread of resistant microorganisms.
References

WHO websites & activities of interest for HH

- "one-stop shop” web page:
- A promotional video for you all to use:
  http://www.who.int/gpsc/5may/video/en/.
- Prof Didier Pittet, 5 May video message – available now to use at your events (http://www.who.int/gpsc/5may/video/en/).
- Hand hygiene and antimicrobial resistance -
  (http://www.who.int/entity/gpsc/5may/patient-tips.pdf?ua=1).
- Evidence of hand hygiene to reduce infections by MDROs
  (http://www.who.int/entity/gpsc/5may/MDRO_literature-review.pdf?ua=1).

- New England Journal of Medicine, Hand Hygiene Video
  (http://www.who.int/gpsc/5may/hand_hygiene_video/en/index.html)
- An Information Session on the AMR report will be webcasted by WHO on Wednesday 7 May at 13:00-14:30h CET:
  http://www.who.int/drugresistance/en/
- HCAs & antibiotic use in European long-term care facilities” report & protocol:
Patient Safety is our business

Thank You